UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

NJ8279

Mr. Andrew W. Anderson, Chief
Installation Restoration Division
Department of the Army
U.S. Army Toxic and Hazardous
Materials Agency
Aberdeen Proving Ground, MD 21010-5401

Dear Mr. Anderson:

This is in response to your letter dated August 10, 1987 regarding response comments to Ft. Monmouth's updated Installation Report.

Mr. Conrad Swann of your staff recently informed us that Dr. John Bonds of Environmental Science and Engineering is preparing comments in response to the U.S. Environmental Protection Agency's (USEPA) and the New Jersey Department of Environmental Protection's (NJDEP) review of the above-mentioned report. It was our understanding that these comments would be submitted to us sometime in September and subsequently, a meeting with EPA, DEP, Ft. Monmouth, and your agency would be arranged to discuss them. It was also stated that at this meeting other Region II sites, which your agency was involved with, would be discussed.

However, until we received your recent letter, we were unaware that the Ft. Monmouth meeting would be substantially delayed due to your preparation of reports for other Region II sites (i.e. Seneca Army Depot, Waterliet Arsenal). In order to proceed as expeditiously as possible, we are requesting that the Ft. Monmouth meeting be arranged as soon as response comments are prepared by Dr. Bonds rather than delaying until a full review of reports is completed for the other sites.

Please contact Helen Shannon of my staff at (212) 264-6664 in order to arrange this meeting. We anticipate hearing from you

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*U.S. GPO : 1986-159-319

sometime in September. Your cooperation in this matter is greatly appreciated.

Sincerely yours,

Vincent Pitruzzello, Chief
Program Support Branch

cc: Dinker Desai, Ft. Monmouth
Raymond Luzecky, NJDEP
Carole Petersen, SIS
Alida Karas, SIS
Robert Hargrove, BIB

AUG 27 1987

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NJDEP Statements/Comments

1. **The Phase I Report does not confirm the existence/absence of contamination.**

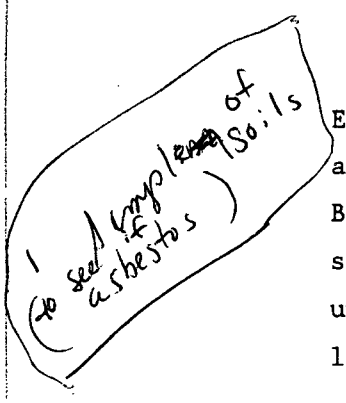
The above statement is true. However, this report was not intended to confirm or refute the existence/absence of contamination. The purpose of the update report was to describe any changes in environmental/hazardous waste disposal conditions and to determine if these changes (if any) would change the previous recommendation not to conduct a remedial investigation at Fort Monmouth, Charles Woods Area, or Evans Area Army properties.

2. Main Post Area

a. **The IAR (IIA, pg. 39) discusses an asbestos waste landfill behind Building 1220. The asbestos was being stored there pending disposal to a state approved landfill. The disposition of this asbestos landfill has not been addressed.**

The statement on pg. 39 of the IIA reads as follows:

> Asbestos waste (pipe insulation, transite) was bagged and landfilled at Fort Monmouth until the mid-1970s. Since that time, it has been stored in a lined, covered pit behind Building 1220 prior to disposal in a special, state-approved landfill (Location 10, Figure 7).



ESE, in reviewing the records, does not interpret this paragraph as Fort Monmouth has created an asbestos waste landfill behind Bldg. 1220. It is interpreted as Fort Monmouth temporarily stored asbestos materials in a secure area (lined, covered pit) until removed (on a contract basis) to a special, state-approved landfill.

Because this activity was not anticipated to represent a problem area, and it was not presented as a problem (with the state)

during onsite interviews, it was not addressed further in the update of the IIA.

b. **The IAR (IIA) identifies a sixth landfill that is not included in the NJPDES permit. Modification of the NJPDES permit may be required to include additional sampling locations and parameters pending site investigation to confirm the existence of this landfill.**

B.34 IAR

Attachment 1 indicates <u>eight</u> suspected/potential/confirmed landfill areas on Fort Monmouth. Attachment 2, prepared after completion of several landfill studies of Fort Monmouth (USAEHA, 1981; USAEHA, 1982; USAEHA, 1983; USAEHA, 1984; USAEHA, 1985; USAEHA, 1986; W.F. Consulich, 1980; RCA Services, 1986; and others), indicates only <u>five</u> landfill areas on the installation. These areas are summarized as follows:

<u>1980 IIA (Attachment 1)</u>	<u>1986 IIA Update (Attachment 2)</u>
Area 1, Landfill--Prior to WWII	Property no longer part of Fort Monmouth
Area 2, Landfill 2--1964 to 1968	Area D
Area 3, Landfill 3--1959 to 1964	Area C
Area 4, Landfill 4--1956	Area A
Area 5, Landfill 5--1952 to 1959	Area A
Area 8, Landfill--1962 to present	Area E
Area 12, Landfill--Data unknown	Area B
Area 14, Landfill--1965 to 1966	Area B

If there is a sixth landfill area that has been overlooked, please identify the area on Attachment 2 and describe the use, including dates of operation. We want to make sure all landfill areas are included in the report and in the NJDEP permit.

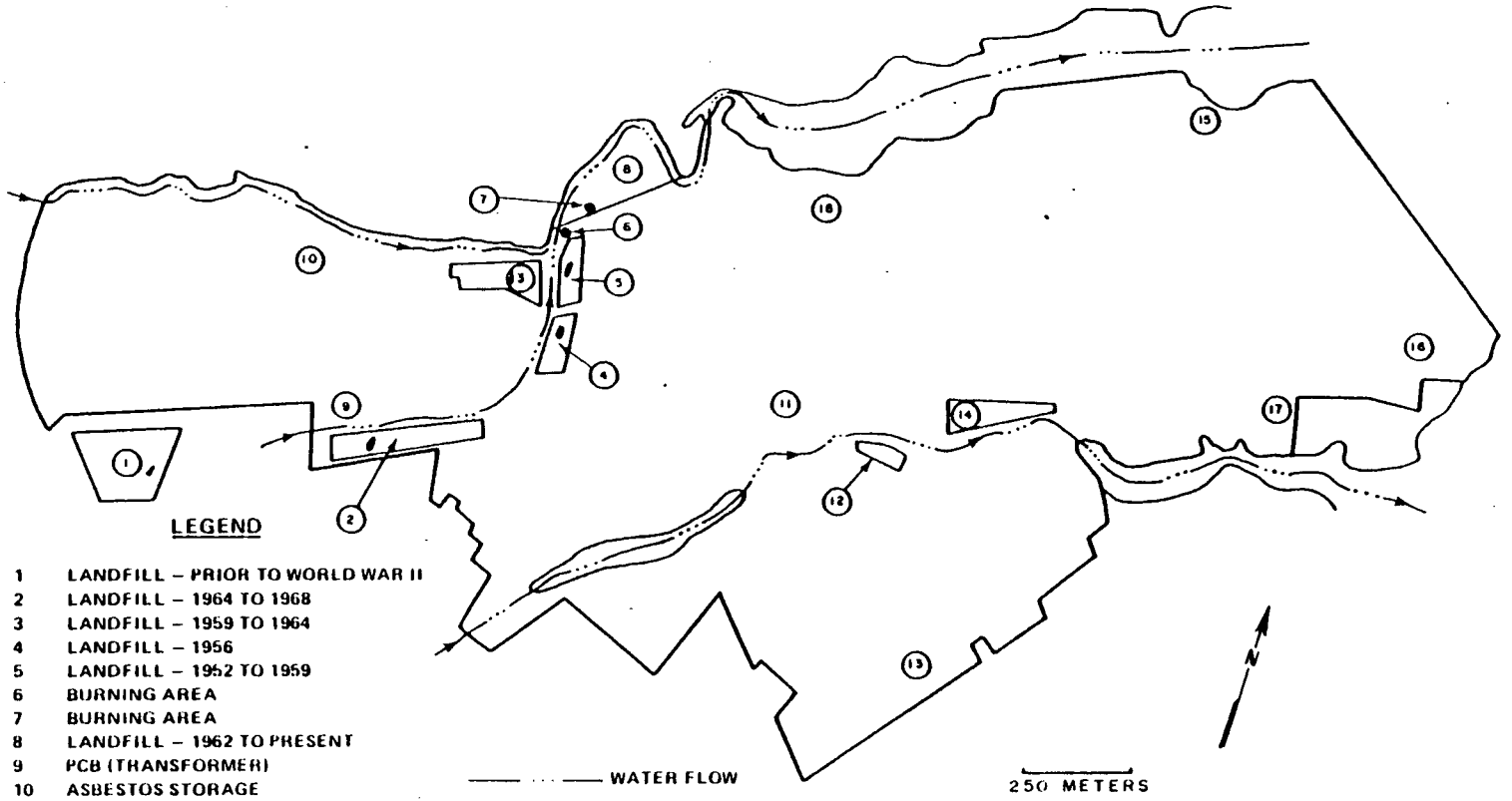
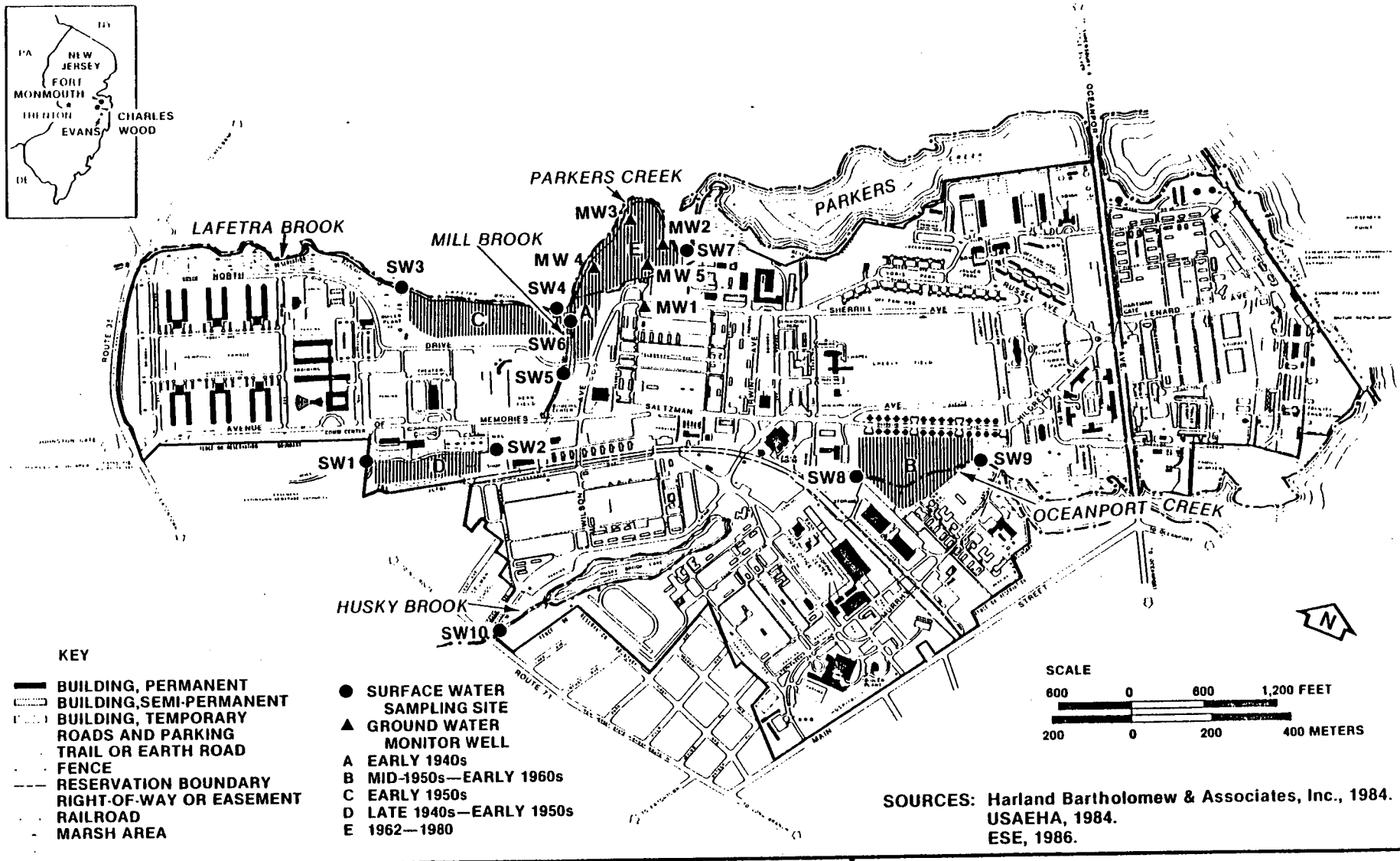


Figure 7. Locations of Known or Suspected Waste Materials, Fort Monmouth - Main Post



SOURCES: Harland Bartholomew & Associates, Inc., 1984.
USAEHA, 1984.
ESE, 1986.

Figure 2-1
MONITOR WELLS AND SURFACE WATER SAMPLING LOCATIONS AT FORT MONMOUTH LANDFILLS

Prepared for:
U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland

c. **Previous ground water investigations at the Main Post were limited in scope. To confirm that there are no hazardous pollutants leaving the site due to the disposal of industrial wastes, a round of priority pollutant analysis of the existing monitoring wells, stream sediments, and surface water should be performed.**

Several ground water/surface water investigations have occurred in which samples were collected and analyzed for those pollutants which could reasonably be expected to be present in the landfills and potentially leaching into adjacent surface waters or ground water. These investigations have not shown the presence or release of any pollutants from Fort Monmouth landfills at concentrations that would be harmful to the environment.

A round of 10 water samples for priority pollutant analysis was included in the USAEHA Water Quality Engineering Study No. 32-24-0475-85, May 29 to June 7, 1984. One basic assumption of this study is the fact that a free interchange of ground water and surface water occurs (note tidal influence on depth to water in monitor wells) and the surface water adjacent to the landfills is representative of waters leaching through the landfills. The results of this study indicated only a potential problem with mercury leaching into Mill Brook. The report recommended that the mercury results be confirmed through additional sampling.

Additional sampling for mercury was accomplished after coordination with Mr. Bob Runyon, NJDEP, on 8 February 1985. The results of the resampling for mercury indicated that the concentrations in Mill Brook were less than 0.2 ug/L and the June 1984 sampling results for mercury were erroneous.

Additional sampling for priority pollutants could be accomplished; however, the past results do not seem to justify any additional efforts, other than to continue the present NJDEP landfill monitoring requirements.

Charles Wood Area (CWA)

a. **The updated Phase I Report indicates that the sludge dump was used for storage of treated sludge. The sludge was utilized at the CWA as a soil conditioner/fertilizer for the onsite golf course. Due to the discharging of metal plating waste into the sewer system, the sludge may have been contaminated. Soil and ground water samples should be taken in the area of the sludge dump and analyzed for PP + 40.**

The 1980 IIA (pg. 20) indicates that no industrial production operations have occurred at CWA. The plating operations were laboratory-size operations and did not result in the continuous release of heavy metals into the STP system.

Therefore, even if these metals (copper, gold, chromium, silver, zinc, platinum, etc.) did concentrate in the sludges, they would not be expected to be present in environmentally harmful concentrations. In addition, the sludges were used as land conditioners and that would have further "diluted" the concentrations in the soil.

This "non-concentration" of metals in the sludges is demonstrated in the following data:

Sample No./ Parameter*	Arsenic (As)	Barium (Ba)	Cadmium (Cd)	Chromium (Cr)	Mercury (Hg)	Lead (Pb)	Silver (Ag)	Selenium (Se)
137-1 Digestor Sludge A	ND	ND	ND	ND	ND	ND	ND	ND
137-2 Digestor Sludge B	ND	ND	ND	ND	ND	ND	ND	ND
137-3 Sludge from Drying Bed	ND	ND	ND	ND	ND	ND	ND	ND
137-4 Sludge, Limestone Treatment Tank	ND	ND	ND	ND	ND	ND	ND	ND
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Limits of Detection	0.50	10.0	0.10	0.50	0.02	0.50	0.50	0.10
TEP Limits	5.0	100	1.0	5.0	0.20	5.0	5.0	1.0

*The EPA toxic extraction procedure was performed on all samples.

TEP = total extraction procedure.
mg/L = milligrams per liter.

The ND (not detected) value is the lowest quantitatively determinable concentration by the method used.

Sludge samples were collected from the STP digestors, sludge drying beds, and at a limestone treatment tank at the Hexagon Bldg. in the Charles Woods Area of the Fort Monmouth Complex.

Source: USAEHA, 1981.

(prepare) b. **The IAR (IIA) identified an area utilized for the disposal of administrative type waste and wood in the southwest corner of the CWA. The type of waste buried at this site and whether there are any leachate problems from this area should be addressed.**

The 1980 IIA did not recognize this as a potential problem area. Based on a review of the records, ESE concurred with this assessment.

The limited information available does not indicate the disposal of any industrial or hazardous wastes at this location (pg. 35 of the 1980 IIA). Because there is no reason to suspect the disposal of hazardous materials at this location, it is difficult to justify a remedial investigation of this location.

c. **The IAR (IIA) described the use of onsite underground tanks for the storage of radioactive liquid waste. The disposition of these tanks must be addressed.**

Please provide a reference as to where the use of onsite underground tanks for the storage of radioactive liquid wastes is described. It was not located in any of the records or reports reviewed during the preparation of these responses.

Evans Area (EA)

a. **The IAR (IIA) identified two suspected landfill areas. An area west of the sewage treatment plant and an area along the north side of Laurel Gully Brook. The identification of the type of material disposed and the required corrective action, if required, must be addressed.**

The 1980 IIA (pg. 35) indicates that both of these suspected "landfill" areas were reportedly used for clean fill. There is no reason to suspect that these areas were used for the disposal of hazardous materials; therefore, it is difficult to justify a remedial investigation at these areas. If industrial disposal operations were suspected, the area would be recommended for additional studies.

b. **The IAR (IIA) described the discharge of plating waste, grease and oil into storm sewers and floor drains. Information on corrective measures taken must be submitted.**

The 1980 IIA (pg. 32) states:

1. Grease and oil from floor drains in the motor pools, vehicle maintenance areas, and vehicle wash racks discharged directly to storm drains until these areas were equipped with grease traps in 1978. The contents of the traps were collected in drums and disposed of by a contractor.

No further corrective measures are required.

2. It was reported (but not confirmed) that until the early 1960s, plating wastes were discharged to a storm drain in the vicinity of Building 7, ultimately draining into Laurel Gulley Brook. At that approximate time, connection was made to the sanitary sewer with a 4 m^3 acid neutralization (limestone) tank between the building and the sewer connection. Treatment of the industrial wastewater was thereby effected by pH control and the STP.

These plating activities were conducted from 1950 until 1976, with occasional piecework plating operations still conducted. The STP is no longer active. Any wastes generated go to the Wall Township Treatment Plant.

No further corrective measures are required.

Other NJDEP Comments

A few aspects of operational and disposal practices at Fort Monmouth may warrant additional or more detailed record and operational practice searches, site inspections, or field investigations. Areas of concern include:

a. **Soil and ground water contamination of diesel and gasoline fuel leaks from underground and aboveground storage tanks, and**

b. **Pesticide, herbicide, rodenticide, and PCB contamination from poor handling practices or spills in the storage areas in Buildings 167 and T-65 (Main Post) and T-2044 (Charles Wood Area).**

The records at Fort Monmouth did not indicate any past or current problems with soil or ground water contamination with POL leaks from underground or aboveground storage tanks. Therefore, these areas are not addressed in this Update IIA. The spillage or leakage of POLs into the environment is always a concern, and, as such, is addressed in the installation Spill Prevention and Control Countermeasure Plan.

The USAEHA conducts yearly inspections of pesticide and PCB storage areas. If poor handling practices are determined, samples may be collected and corrective measures recommended and implemented. A review of past USAEHA reports and other installation records did not indicate any poor handling practices nor did they imply the presence of pesticide- or PCB-contaminated soils on Fort Monmouth, Charles Woods Area, or Evans Area.

3. EPA Comments and Responses

a. **With regard to the sludge drying beds:**

1. **pg. 3.3--It was noted: "Sludge and supernatent liquid was removed from the EA STPs and the plant was sanitized and sterilized." What is meant by sanitized and sterilized?**

The words "sanitized and sterilized" were used in some records describing the status of the STP when it was cleaned after being closed. The actual contract document for the cleaning required the contractor to "flush and disinfect the entire treatment plant, Camp Evans." Because none of the documents provide additional insight into the meaning of sanitize, sterilize, or disinfect (with respect to the Evans Area STP), the exact cleaning method intended by these words cannot be provided. However, it can be assumed that the intent was to clean the plant to a point where no biological activity was occurring in any of the tanks or components of the STP system.

2. **pg. 3.2, 3.3--All sites with sludge drying beds at Fort Monmouth's Main Post, CWA, and EA were potential sources of contamination. Despite the fact that they are closed now and "the quantities of sludges and supernatents were removed," these areas should be tested for priority pollutants. (Ground water and soil samples should be taken and analyzed for priority pollutants.) The sludge which accumulated over many years may be a major source of high content levels of chromium, lead, and mercury.**

There are no sludge drying beds at Fort Monmouth, Evans Area, or Charles Woods Area. Records do not indicate significant plating operations that would have provided large quantities of heavy metals in the sludges. In addition, the sludges were not allowed to accumulate because they were used as soil conditioners. Also, any heavy metals contaminated would be "diluted" to undetectable differences from native soils, based on the low concentrations that would be anticipated. Furthermore, extraction procedure toxicity tests completed on sludges from the CWA area in 1981 (described in the CWA responses under 3.a.) did not indicate the presence of toxic metals at harmful concentrations.

b. General Comments:

The geology of the Main Post, CWA, and EA is conducive to migration via surface and subsurface routes. Since no data are available on subsurface migration and limited data are available on surface migration, a ground water monitoring program would help to determine if the contaminants are migrating and in what direction they are migrating.

The geology of Main Post, CWA, and EA is conducive to migration. It is not true, however, that no data are available for surface and subsurface waters. The data that are available do not indicate the presence or migration of

contaminants. Fort Monmouth does have a ground water monitoring program, as required by the State of New Jersey. Samples are collected on an annual basis and reported to the state.